List of Claims:

Claim 1 (currently amended): A speech coding system with input signal transformation, the speech coding system comprising:

an encoder disposed to receive an input signal, the encoder to provide a bitstream based upon a speech coding of a portion of the input signal,

where the encoder adaptively tracks a zero-level and at least one quantization level of the input signal;

where the encoder calculates at least one silence detection parameter; and

where the encoder compares the at least one silence detection parameter of the input signal to at least one threshold; and

where the encoder ramps the input signal to a the zero-level when a the portion of the input signal comprises the silence noise.

Claim 2 (cancelled)

Claim 3 (currently amended): The speech coding system according to Claim 2 1, where the zero-level is one of 0 and 8.

Claim 4 (currently amended): The speech coding system according to Claim 2 1, where the at least one quantization level comprises:

a smallest positive signal value;

a second smallest positive signal value;

a smallest absolute negative signal value; and

a second smallest absolute negative signal value.

Claim 5 (currently amended): The speech coding system according to Claim ~~2~~ 1, where the at least one silence detection parameter comprises at least one frame rate.

Claim 6 (original): The speech coding system according to Claim 5, where the at least one frame rate comprises at least one of a zero_rate, a low_rate, and a high_rate.

Claim 7 (currently amended): The speech coding system according to Claim 1, where the encoder ramps the input signal to ~~a~~ the zero-level when a current portion of the input signal is a first silence portion.

Claim 8 (original): The speech coding system according to Claim 1, where the encoder maintains the input signal at the zero-level when consecutive portions of the input signal comprise silence noise.

Claim 9 (currently amended): The speech coding system according to Claim 1, where the encoder ramps-up the input signal from ~~a~~ the zero-level when a current portion of the input signal is a first non-silence portion.

Claim 10 (currently amended): The speech coding system according to Claim 1, where the encoder maintains the input signal when consecutive portions of the input signal do not comprise the silence noise.

Claim 11 (original): The speech coding system according to Claim 1, where the speech coding comprises code excited linear prediction (CELP).

Claim 12 (original): The speech coding system according to Claim 1, where the speech coding comprises extended code excited linear prediction (eX-CELP).

Claim 13 (original): The speech coding system according to Claim 1, where the portion of the input signal is one of a frame, a sub-frame, and a half frame.

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Claim 14 (original): The speech coding system according to Claim 1, where the encoder comprises a digital signal processing (DSP) chip.

Claim 15 (original): The speech coding system according to Claim 1, further comprising a decoder operatively connected to receive the bitstream from the encoder, the decoder to provide a reconstructed signal based upon the bitstream.

Claim 16 (currently amended): A method of transforming an input signal in a speech coding system, the method comprising:

adaptively tracking a zero-level and at least one quantization level of the input signal;

calculating at least one silence detection parameter;

comparing the at least one silence detection parameter to at least one threshold;

determining whether the input signal comprises a silence noise; and

ramping the input signal to a the zero-level when the input signal comprises the silence noise.

Claim 17 (currently amended): The method according to Claim 16, further comprising:

determining whether a current portion of the input signal is a first silence portion when the current portion is determined to comprise the silence noise; and

ramping the input signal to a the zero-level when the current portion of the input signal is the first silence portion.

Claim 18 (original): The method according to Claim 17, further comprising maintaining the input signal at the zero-level when there are consecutive silence portions of the input signal.

Claim 19 (currently amended): The method according to Claim 16, further comprising:

determining whether a current portion of the input signal is a first non-silence

portion when the current portion is determined not to comprise the silence noise; and

ramping-up the input signal from a the zero-level when the current portion of the

input signal is the first non-silence portion.

Claim 20 (original): The method according to Claim 19, further comprising maintaining

the input signal when there are consecutive non-silence portions of the input signal.

Claim 21 (original): The method according to Claim 16, further comprising comparing

the at least one silence detection parameter with the at least one threshold individually or in

combination.

Claim 22 (original): The method according to Claim 16, further comprising: comparing

the at least one silence detection parameter from the current portion of the input signal and from

at least one preceding portion of the input signal with the at least one threshold.

Claim 23 (new): The speech coding system according to Claim 1, wherein the encoder

calculates the at least one silence detection parameter based on the zero-level and the at least one

quantization level, and wherein the encoder determines that the portion of the input signal

comprises the silence noise based on comparing the at least one silence detection parameter of

the input signal to the at least one threshold.

Claim 24 (new): The method according to Claim 16, wherein the calculating the at least

one silence detection parameter is based on the zero-level and the at least one quantization level,

and wherein the determining is based on the comparing.

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